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Reply to Office Action of March 26, 2003

Amendments of the Claims

The current listing of the claims replaces all previous listings and amendments of the claims.

1. (Currently Amended) A semiconductor power amplifier for amplifying a high frequency signal inputted to a signal input terminal by first and second transistors connected in parallel to each other to output the amplified signal via a signal output terminal, said semiconductor power amplifier comprising:

a first capacitor element connected between said signal input terminal and an input terminal of said first transistor;

a second capacitor element connected between said signal input terminal and an input terminal of said second transistor; and

a ~~first impedance element~~ resistor, one end of which is connected to the input terminal of said first transistor, and the ~~other~~ another end of which is connected to the input terminal of said second transistor.

2. (Original) A semiconductor power amplifier for amplifying a signal inputted to a signal input terminal by first and second transistors connected in parallel to each other to output the amplified signal via a signal output terminal, said semiconductor power amplifier comprising:

a first inductor element and a first capacitor element connected in series between said signal input terminal and an input terminal of said first transistor;

a second inductor element and a second capacitor element connected in series between said signal input terminal and an input terminal of said second transistor;

a first impedance element connected between the respective input terminals of said first and second transistors;

a third inductor element connected between an output terminal of said first

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transistor and said signal output terminal; and

a fourth inductor element connected between an output terminal of said second transistor and said signal output terminal.

3. (Previously Presented) A semiconductor power amplifier for amplifying a high frequency signal inputted to a signal input terminal by first and second transistors connected in parallel to each other to output the amplified signal via a signal output terminal, said semiconductor power amplifier comprising:

a first power amplifying section comprising:

a first capacitor element connected between said signal input terminal and an input terminal of said first transistor;

a second capacitor element connected between said signal input terminal and an input terminal of said second transistor; and

a first impedance element, one end of which is connected to the input terminal of said first transistor, and the other end of which is connected to the input terminal of said second transistor;

a second power amplifying section disposed separately from said first power amplifying section, said second power amplifying section comprising third and fourth transistors, third and fourth capacitor elements, and a second impedance element; and

a third impedance element connected between said first impedance element and said second impedance element,

wherein respective input terminals of said first and second power amplifying sections are connected to said signal input terminal via first and second inductor elements.

4. (Previously Presented) The semiconductor power amplifier according to claim 3, further comprising:

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a third inductor element whose one end is connected to said first capacitor element and whose other end is connected to said first inductor element and said second capacitor element; and

a fourth inductor element whose end is connected to said second inductor element and said third capacitor element and whose other end is connected to said fourth capacitor element.

5. (Previously Presented) The semiconductor power amplifier according to claim 3, further comprising:

a third inductor element whose one end is connected to said first capacitor element and whose other end is connected to said first inductor element;

a fourth inductor element whose one end is connected to said first inductor element and whose other end is connected to said second capacitor element;

a fifth inductor element whose one end is connected to said third capacitor and whose other end is connected to said second inductor element; and

a sixth inductor element whose one end is connected to said second inductor element and whose other end is connected to said fourth capacitor element.

6. (Previously Presented) The semiconductor power amplifier according to claim 2, further comprising:

a first power amplifying section comprising said first and second transistors, said first and second capacitor elements, and said first impedance element;

a second power amplifying section disposed separately from said first power amplifying section, said second power amplifying section comprising third and fourth transistors, third and fourth capacitor elements, and a second impedance element; and

a third impedance element connected between said first impedance element and said second impedance element,

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wherein respective input terminals of said first and second power amplifying sections are connected to said signal input terminals via fifth and sixth inductor elements.

7. (Previously Presented) The semiconductor power amplifier according to claim 6, further comprising:

a seventh inductor element whose one end is connected to said first capacitor element and whose other end is connected to said fifth inductor element and said second capacitor element; and

an eighth inductor element whose one end is connected to said sixth inductor element and said third capacitor element and whose other end is connected to said fourth capacitor element.

8. (Previously Presented) The semiconductor power amplifier according to claim 6, further comprising:

a seventh inductor element whose one end is connected to said first capacitor element and whose other end is connected to said fifth inductor element;

an eighth inductor element whose one end is connected to said fifth inductor element and whose other end is connected to said second capacitor element;

a ninth inductor element whose one end is connected to said third capacitor element and whose other end is connected to said sixth inductor element; and

a tenth inductor element whose one end is connected to said sixth inductor element, and whose other end is connected to said fourth capacitor element.

9. (Original) The semiconductor power amplifier according to claim 1, further comprising a bias circuit for supplying a direct current bias voltage to the respective input terminals of said first and second transistors.

10. (Original) The semiconductor power amplifier according to claim 2,

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further comprising a bias circuit for supplying a direct current bias voltage to the respective input terminals of said first and second transistors.

11. (Original) The semiconductor power amplifier according to claim 9, further comprising a plurality of impedance elements or inductor elements connected between the respective input terminals of said first and second transistors and an output terminal of said bias circuit.

12. (Original) The semiconductor power amplifier according to claim 10, further comprising a plurality of impedance elements or inductor elements connected between the respective input terminals of said first and second transistors and an output terminal of said bias circuit.

13. (Previously Presented) A multistage monolithic integrated circuit comprising:

a plurality of amplifiers connected in cascade,

wherein a last-stage amplifier of these amplifiers includes a semiconductor power amplifier for amplifying a high frequency signal inputted to a signal input terminal by first and second transistors connected in parallel to each other to output the amplified signal via a signal output terminal, said semiconductor power amplifier comprising:

a first capacitor element connected between said signal input terminal and an input terminal of said first transistor;

a second capacitor element connected between said signal input terminal and an input terminal of said second transistor; and

a first impedance element, one end of which is connected to the input terminal of said first transistor, and the other end of which is connected to the input terminal of said second transistor.

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14. (Original) The semiconductor power amplifier according to claim 13, wherein a microwave signal is inputted to a signal input terminal of said last-stage amplifier.

15. (Original) The semiconductor power amplifier according to claim 13, wherein said first and second transistors are field-effect transistors by compound semiconductors or bipolar transistors by the compound semiconductors.

16. (Original) A multistage monolithic integrated circuit comprising:
a plurality of amplifiers connected in cascade,
wherein a last-stage amplifier of these amplifiers is constituted of the semiconductor power amplifier according to claim 2.

17. (Original) The semiconductor power amplifier according to claim 16, wherein a microwave signal is inputted to a signal input terminal of said last-stage amplifier.

18. (Original) The semiconductor power amplifier according to claim 16, wherein said first and second transistors are field-effect transistors by compound semiconductors or bipolar transistors by the compound semiconductors.